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EXAMINER	
HOFFMAN, BRANDON S	

ART UNIT	PAPER NUMBER
2136	

DATE MAILED: 04/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/731,039	MOSKOWITZ ET AL.	
	Examiner	Art Unit	
	Brandon Hoffman	2136	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 January 2005* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-68* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-68* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7-23-04
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

1. Claims 1-68 are pending in this office action.

2. Applicant's arguments with respect to claims 1-68 have been considered and are persuasive. However, a new ground of rejection is made in view of Yeung et al., Binding et al., Pietropaolo et al, and Miller et al.

Rejections

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-14, 17-29, 31-35, 37, 38, 47-56, 59, and 66-68 are rejected under 35 U.S.C. 102(e) as being anticipated by Yeung et al. (U.S. Patent No. 6,668,246).

Regarding claims 1 and 66, Yeung et al. teaches a method/system for securing a data object, comprising:

- Providing a data object comprising digital data and file format information (fig. 2, ref. num 220/225 and col. 5, lines 3-9);
- Embedding independent data into the data object (fig. 2, ref. num 215 and col. 4, line 66 through col. 5, line 9); and
- Scrambling the data object to degrade the data object to a predetermined signal quality level (fig. 2, ref. num 260 and col. 6, lines 20-32).

Regarding claims 2 and 5, Yeung et al. teaches the step of performing the steps of embedding and scrambling until a predetermined condition is met (col. 6, lines 20-32).

Regarding claims 3 and 6, Yeung et al. teaches the predetermined condition comprises reaching a desired signal quality level of the data object (col. 6, lines 20-32).

Regarding claims 4 and 67, Yeung et al. teaches the steps of:

- Descrambling the data object to upgrade the data object to a predetermined signal quality level (fig. 4, ref. num 430 and col. 8, lines 42-57); and
- Decoding the embedded independent data (fig. 4, ref. num 440 and col. 8, line 58 through col. 9, line 4).

Regarding claim 7, Yeung et al. teaches the predetermined signal quality level is selected from the group consisting of telephone quality, radio quality, MP3 quality, and CD quality (col. 2, lines 60-62 and col. 8, lines 52-53).

Regarding claim 8, Yeung et al. teaches the predetermined signal quality level is selected from the group consisting of NTSC quality, QuickTime quality, Macrovision quality, satellite quality, high definition quality, and DVD quality (col. 2, lines 60-62 and col. 8, lines 51-52).

Regarding claim 9, Yeung et al. teaches the independent data comprises authenticatable data (col. 4, lines 40-47 and col. 4, lines 66-67 and fig. 2, ref. num 215).

Regarding claim 10, Yeung et al. teaches wherein the authenticatable data comprises a robust open watermark (col. 4, lines 40-47 and col. 4, lines 66-67 and fig. 2, ref. num 215).

Regarding claim 11, Yeung et al. teaches wherein the step of decoding the embedded independent data comprises using a public key to decode the independent data (col. 6, lines 52-64, fingerprinting uses publicly known data of the client to watermark the data).

Regarding claim 12, Yeung et al. teaches the data object comprises at least one of digital music, video, and at least one image (col. 2, lines 60-62 and col. 5, lines 18-32).

Regarding claim 13, Yeung et al. teaches the step of scrambling the independent data before the embedding step so that the embedding step embeds the scrambled independent data into the data object (col. 6, lines 52-64, watermarking is performed after the scrambling).

Regarding claims 14 and 68, Yeung et al. teaches a method/system for distributing a data signal, comprising:

- Providing a data signal comprising digital data and file format information (fig. 2, ref. num 220/225 and col. 5, lines 3-9);
- Selecting a first scrambling technique to apply to the data signal; scrambling the data signal using the first scrambling technique, resulting in a first-level degraded data signal; and creating a first descrambling key for the first-level degraded data signal based on the first scrambling technique (col. 5, line 62 through col. 6, line 3 and col. 6, lines 20-32);
- Selecting a second scrambling technique to apply to the first-level degraded data signal; scrambling the first-level degraded data signal using a second scrambling technique, resulting in a second-level degraded data signal; and creating a second descrambling key for the second-level degraded data signal based on the second scrambling technique (col. 5, line 62 through col. 6, line 3 and col. 6, lines 33-46).

Regarding claim 17, Yeung et al. teaches at least one of the first scrambling technique and the second scrambling technique comprises manipulation of the file format information (col. 6, lines 20-32).

Regarding claim 18, Yeung et al. teaches at least one of the first scrambling technique and the second scrambling technique comprises a cryptographic cipher (col. 6, lines 33-46).

Regarding claim 19, Yeung et al. teaches the data signal quality levels are selected from the group consisting of CD quality, MP3 quality, radio quality, and telephone quality (col. 2, lines 60-62 and col. 8, lines 52-53).

Regarding claim 20, Yeung et al. teaches the predetermined data signal quality level is selected from the group consisting of NTSC quality, QuickTime quality, Macrovision quality, satellite quality, and DVD quality (col. 2, lines 60-62 and col. 8, lines 51-52).

Regarding claim 21, Yeung et al. teaches a method for distributing a data object, comprising:

- Providing a data object comprising digital data and file format information (fig. 2, ref. num 220/225 and col. 5, lines 3-9);
- Encoding independent authentication data into the data object (fig. 2, ref. num 215 and col. 4, line 66 through col. 5, line 9); and
- Manipulating the file format information based on at least one signal characteristic of the data object (fig. 2, ref. num 260 and col. 6, lines 20-32).

Regarding claim 22, Yeung et al. teaches the independent authentication data is steganographically encoded into the data object (col. 4, lines 40-47 and col. 4, lines 66-67 and fig. 2, ref. num 215).

Regarding claim 23, Yeung et al. teaches wherein the independent authentication data comprises a robust open watermark (col. 4, lines 40-47 and col. 4, lines 66-67 and fig. 2, ref. num 215).

Regarding claim 24, Yeung et al. teaches at least one signal characteristic of the data object comprises file format information (col. 6, lines 28-32).

Regarding claims 25 and 26, Yeung et al. teaches the step of generating at least one cryptographic key based on a result of the manipulation of the file format information comprises selecting at least one of a plurality of signal characteristics of the data format (col. 6, lines 28-32); and ciphering the results of the order of steps of signal characteristic selection (col. 5, line 62 through col. 6, line 19).

Regarding claims 27 and 28, Yeung et al. teaches the steps of encoding independent authentication data into the data object and manipulating the file format information based on at least one signal characteristic of the data object comprise multiple step encoding and manipulation (col. 6, lines 28-32), and an order of the multiple steps is ciphered to generate a predetermined key (col. 5, line 62 through col. 6, line 19).

Regarding claim 29, Yeung et al. teaches generating at least one cryptographic key having a logical relationship with the manipulation of the file format information and the steganographic encoding method (col. 5, line 62 through col. 6, line 3).

Regarding claim 31, Yeung et al. teaches a method for distributing data signals, comprising:

- Embedding independent data into a data object (fig. 2, ref. num 215);
- Scrambling the data object (fig. 2, ref. num 260);
- Distributing the scrambled data object (fig. 2, ref. num 290);
- Distributing at least one predetermined key that enables access to the data object (col. 5, line 62 through col. 6, line 3); and
- Descrambling the scrambled data object with the predetermined key (fig. 4, ref. num 430).

Regarding claim 33, Yeung et al. teaches the independent data comprises authentication information (col. 4, lines 40-47 and col. 4, lines 66-67 and fig. 2, ref. num 215).

Regarding claim 34, Yeung et al. teaches the independent data comprises a one-way hash (col. 3, lines 15-28).

Regarding claim 35, Yeung et al. teaches the independent data comprises a digital signature (fig. 1, ref. num 155).

Regarding claims 37 and 38, Yeung et al. teaches the steps of embedding independent data into a data object and scrambling the data object each has a logical relationship with the generation of the predetermined key and a communications channel for which the data signal is being prepared (col. 6, lines 4-19).

Regarding claim 47, Yeung et al. teaches the step of scrambling the data object comprises manipulating file format information of the data object (col. 6, lines 20-32).

Regarding claim 48, Yeung et al. teaches the step of scrambling the data object comprises scrambling the data object with a cryptographic cipher (col. 6, lines 33-46).

Regarding claim 49, Yeung et al. teaches a method for data signal distribution, comprising:

- Applying a steganographic technique for embedding independent data into the data signal (fig. 2, ref. num 215 and col. 4, line 66 through col. 5, line 9);
- Applying a scrambling technique selected from the group consisting of file format manipulation and partial encryption (fig. 2, ref. num 260 and col. 6, lines 20-32); and Generating a predetermined key (col. 5, line 62 through col. 6, line 3).

Regarding claim 50, Yeung et al. teaches the file format manipulation scrambling technique has a relationship with at least one signal characteristic of the data signal (col. 6, lines 28-32).

Regarding claim 51, Yeung et al. teaches the partial encryption scrambling technique is unrelated to any characteristic of the data signal (col. 6, lines 32-46).

Regarding claim 52, Yeung et al. teaches the partial encryption scrambling technique degrades a signal quality of the data signal (col. 6, lines 23-32).

Regarding claim 53, Yeung et al. teaches the predetermined key enables descrambling of the signal (col. 8, lines 1-21).

Regarding claim 54, Yeung et al. teaches the predetermined key is based on unique identifying information for a receiver (col. 6, lines 4-19).

Regarding claims 55 and 56, Yeung et al. teaches the predetermined key is based on a signal quality threshold that is adjustable in at least one of a time, a frequency, a bit depth, and a measure of payment that may be adjusted for at least one of a time, a frequency, and a bit depth (col. 2, lines 60-62 and col. 8, lines 29-57, the time/frequency or bit depth is low for a free subscription, but increases as the subscription price increases).

Regarding claim 59, Yeung et al. teaches the predetermined key can be broken into a plurality of discrete partial keys, each discrete partial key representing less than an entire descrambled state for the data signal (col. 5, line 62 through col. 6, line 19).

Claims 60, 63, and 64 are rejected under 35 U.S.C. 102(e) as being anticipated by Miller et al. (U.S. Patent No. 6,049,838).

Regarding claim 60, Miller et al. teaches a method for bandwidth allocation, comprising:

- Presenting a plurality of data objects to a user, each data object having a security application (col. 5, lines 28-42);
- Linking at least a first data object to at least one second data object (col. 5, lines 28-42);
- Wherein a characteristic of the first data object causes a change in the second data object (col. 5, lines 28-42).

Regarding claim 63, Miller et al. teaches a signal quality level of the second data object is increased with a predetermined key (col. 10, lines 20-56).

Regarding claim 64, Miller et al. teaches wherein the predetermined key comprises at least one session key (col. 10, lines 20-56).

Claim Rejections - 35 USC § 103

6. Claims 15, 16, 32, 57, and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yeung et al. (USPN '246) in view of Hirose (U.S. Patent No. 5,917,915).

Regarding claim 15, Yeung et al. teaches three levels of data—a data signal, a first-level degraded data signal, and a second-level degraded signal (col. 5, line 10 through col. 6, line 46). However, Yeung et al. does not teach associating a first, second, or third payment level with the respective data signals.

Hirose teaches associating a first, second, and third payment level with the associated data signals (col. 11, lines 9-12).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to combine associating a first, second, and third payment level with the associated data signals, as taught by Hirose, with the method of Yeung et al. It would have been obvious for such modifications because associating different payment levels with different amounts of data allows some users to get a limited dataset for little or no money while allowing other users to get full data for a higher premium.

Regarding claim 16, the combination of Yeung et al. as modified by Hirose teaches selecting a payment level; and applying at least one of the descrambling keys to the second-level degraded data signal, resulting in the associated data signal (see col. 11, lines 13-37 of Hirose).

Regarding claim 32, the combination of Yeung et al. in view of Hirose teaches the independent data comprises payment information (see fig. 3, CONTRACT CONTENT of Hirose).

Regarding claim 57, the combination of Yeung et al. in view of Hirose teaches the predetermined key is pre-generated based on at least one expected characteristic of the data signal (see col. 5, lines 35-39 of Hirose).

Regarding claim 58, the combination of Yeung et al. in view of Hirose teaches the predetermined key is divisible into a plurality of discrete partial keys, each discrete partial key representing less than an entire payment for the data signal (see col. 11, lines 9-37 of Hirose).

Claims 30, 36, 39-42, and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yeung et al. (USPN '246) in view of Binding et al. (U.S. Patent No. 6,775,772).

Regarding claim 30, Yeung et al. teaches all the limitations of claim 21, above. However, Yeung et al. does not teach generating an authorization key that is dependent on a public key and a private key, wherein the authorization key is further dependent on at least one of a time, a channel, and an object.

Binding et al. teaches generating an authorization key that is dependent on a public key and a private key, wherein the authorization key is further dependent on at least one of a time, a channel, and an object (col. 9, line 64 through col. 10, line 11).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to combine generating an authorization key based on a public and private key, as taught by Binding et al., with the method of Yeung et al. It would have been obvious for such modifications because each party can authenticate the other party based on the use of public and private keys—this minimizes the possibility of replay attacks (see col. 10, lines 9-11 of Binding et al.).

Regarding claim 36, Yeung et al. teaches all the limitations of claim 31, above. However, Yeung et al. does not teach the independent data comprises a time stamp.

Binding et al. teaches the independent data comprises a time stamp (col. 11, lines 5-11).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to combine a time stamp, as taught by Binding et al., with the method of Yeung et al. It would have been obvious for such modifications because time stamps avoid a range of possible attacks (see col. 11, lines 5-11 of Binding et al.).

Regarding claim 39, the combination of Yeung et al. in view of Binding et al. teaches the step of descrambling the scrambled data object comprises:

- Initiating the transmission of a recipient public key from an intended recipient of the data object to a sender of the data object (see col. 11, lines 12-24 of Binding et al.); and
- Initiating the transmission of a sender session key from the sender to the recipient to initiate descrambling of the embedded independent data (see col. 11, lines 12-24 of Binding et al.).

Regarding claim 40, the combination of Yeung et al. in view of Binding et al. teaches the step of descrambling the scrambled data object comprises:

- Initiating a session key-based exchange between a sender and receiver (see col. 11, lines 12-24 of Binding et al.);
- Wherein the session key is dependent on at least one of a channel, a time, and a data object (see col. 3, lines 57-66 of Binding et al.).

Regarding claim 41, the combination of Yeung et al. in view of Binding et al. teaches the step of descrambling the scrambled data object comprises initiating a session key-based exchange between a sender and a receiver that is a timing based timing mechanism (see col. 11, lines 12-24 and col. 3, lines 57-66 of Binding et al.).

Regarding claim 42, the combination of Yeung et al. in view of Binding et al. teaches the step of descrambling the scrambled data object comprises initiating a pooling of similar session keys (see col. 9, lines 3-11 of Binding et al.).

Regarding claim 46, the combination of Yeung et al. in view of Binding et al. teaches the step of descrambling the scrambled data object comprises updating a signal quality of the data object based on an approval of the session keys by the originating data signal server (see col. 11, lines 12-24 of Binding et al. and col. 8, lines 1-21 of Yeung et al.).

Claims 43-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yeung et al. (USPN '246) in view of Pietropaolo et al. (U.S. Patent No. 6,351,765).

Regarding claim 43, Yeung et al. teaches all the limitations of claim 31, above. However, Yeung et al. does not teach the step of descrambling the scrambled data object comprises logically associating a signal quality with a predetermined estimation of a bandwidth requirement for the session.

Pietropaolo et al. teaches the step of descrambling the scrambled data object comprises logically associating a signal quality with a predetermined estimation of a bandwidth requirement for the session (col. 4, lines 50-61).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to combine logically associating a signal quality with an estimation of bandwidth requirement, as taught by Pietropaolo et al., with the method of Yeung et al. It would have been obvious for such modifications because some network transmission lines are only available for a limited bandwidth while others can handle a higher bandwidth. By estimating and adapting prior to transmission, a user is guaranteed an appropriately scaled signal.

Regarding claim 44, the combination of Yeung et al. in view of Pietropaolo et al. teaches the step of descrambling the scrambled data object comprises logically associating a signal quality with a bandwidth allocation model (see col. 4, lines 50-61 of Pietropaolo et al.).

Regarding claim 45, the combination of Yeung et al. in view of Pietropaolo et al. teaches the step of descrambling the scrambled data object comprises logically associating a signal quality with a signal quality parameter (see col. 4, lines 50-61 of Pietropaolo et al.).

Claim 61 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al. (USPN '838) in view of Allen (U.S. Patent No. 5,418,713).

Regarding claim 61, Miller et al. teaches all the limitations of claim 60, above. However, Miller et al. does not teach wherein the first data object comprises advertising.

Allen teaches wherein the first data object comprises advertising (col. 14, lines 31-44).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to combine advertising as the first data object, as taught by Allen, with the method of Miller et al. It would have been obvious for such modifications because advertising allows additional revenue to be paid to the provider of the services, thereby enabling the provider of services to lower costs to consumers.

Claims 62 and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al. (USPN '838) in view of Hirose et al. (USPN '915).

Regarding claim 62, Miller et al. teaches all the limitations of claim 60, above. However, Miller et al. does not teach an increased quantity of the first data object causes a signal quality level of the second data object to increase.

Hirose et al. teaches an increased quantity of the first data object causes a signal quality level of the second data object to increase (col. 11, lines 9-33).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to combine increasing signal quality of a second object with an increased quantity of a first data object, as taught by Hirose et al., with the method of Miller et al. It would have been obvious for such modifications because allowing one content to be increased (such as advertising) gives the advertising company more of a viewing area. This means the

advertising company pays more for the ad. This in turn means more of a second object can be shown (increased signal quality).

Regarding claim 65, the combination of Miller et al. in view of Hirose et al. teaches at least one session key adjusts a payment for the second data object (see col. 11, lines 9-33 of Hirose et al.).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brandon S Hoffman whose telephone number is 571-272-3863. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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